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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,096	10/15/2001	Tetsuya Itano	35.C15873	9346
5514	7590	06/17/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			MOE, AUNG SOE	
		ART UNIT	PAPER NUMBER	
			2612	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/976,096	ITANO ET AL.	
	Examiner Aung S. Moe	Art Unit 2612	

**– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –**  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 14 January 2005.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 7-14 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1 and 3-6 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date SEE ATTACHED.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of Species of Figs. 7-11 and claims 1 and 3-6 in the reply filed on 1/14/2005 is acknowledged. The traversal is on the ground(s) that the various species are closely related and would not require separate fields of search.

This is not found persuasive because it is noted that the most recent restriction requirement made was in the form of an election of Species, not a restriction requirement between more than one invention. Moreover, 35 U.S.C. 121 provides that election of a single disclosed species may be required to one of two or more independent and distinct inventions (i.e., see MPEP 806.04). In this case, the invention elected by the Applicant (i.e., Species of Figs. 7-11) is disclosed in the specification and drawings as being embodied in multiple patentably distinct embodiments. In view of this, the mere evidence of several patentably distinct embodiments is *prima facie* evidence of examining burdens of the Examiner.

As for claim 1 is being alleged to be generic to Species I and IV, the Examiner agrees with the Applicant's position.

The requirement is still deemed proper and is therefore made FINAL.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3-5 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Meyers (U.S. 6,137,535).

Regarding claim 1, Meyers '535 discloses an image pickup apparatus (Fig. 1 and 9) comprising: a plurality of pixel areas (i.e., the area 22 as shown in Fig. 1) arranged on a single semiconductor chip (100) to be adjacent to each other through a predetermined space (i.e., noted the space between the sub-group 22 as shown in Figs. 1 and 2), each of said pixel areas having pixels arranged two-dimensionally (i.e., noted the row and column of photo-detector 24 as shown in Fig. 1), each pixel having a photoelectric conversion unit (24); and

a plurality of micro-lenses (i.e., noted the elements 10/12) for forming light into images, wherein said plurality of micro-lenses (10/12) are formed on said plurality of pixels areas (22) and on the predetermined spaces between said plurality of pixel areas (i.e., noted the lenslet array 10 formed on the predetermined spaces between the sub-group 22 as shown in Figs. 1 and 2).

Regarding claim 3, Meyers '535 discloses an apparatus according to claim 1 (i.e., see above), wherein said plurality of pixel areas (22) comprise at least first, second, and third pixel areas (i.e., noted the color pixel area as shown in Fig. 1B), said first pixel area receiving a first

color component from an object, said second pixel area receiving a second color component from the object, and said third pixel area receiving a third color component from the object (i.e., noted that each sub-groups 22 has a pixel areas 24 for receiving a different color component from an object, such as Red, Green and Blue, thus, the plurality of pixel area 22 comprises red pixel area, green pixel areas and blues pixel area for each pixel 24).

Regarding claim 4, Meyers '535 discloses an apparatus according to claim 3 (see above), wherein the first color component is a red component (i.e., noted the read color component of the pixel area 24 of one of the sub-group 22 as shown in Figs. 1B and 2), the second color component is a green component (i.e., noted the green color component of the pixel area 24 of one of the sub-group 22 as shown in Figs. 1B and 2), and the third color component is a blue component (i.e., noted the green color component of the pixel area 24 of one of the sub-group 22 as shown in Figs. 1B and 2).

Regarding claim 5, Meyers '535 discloses an apparatus according to claim 1 (see above), further comprising a plurality of lenses (i.e., see Figs. 1-2; col. 7, lines 35-50) for forming light into images, said lenses being provided corresponding to said respective pixel areas (i.e., see Figs. 1-2; col. 12, lines 15+).

Regarding claim 6, Meyers '535 discloses an apparatus according to claim 1 (see above), further comprising: a signal processing unit adapted to form an image by synthesizing signals respectively output from said plurality of pixel areas (i.e., noted from Fig. 9, that the image sensor 100 is normally used in the digital camera, and Meyers '535 stated in col. 3, lines 50-55 that the image signals from the sub-groups are synthesized to produced a large high resolution,

thus, the digital camera system of Meyers '535 must includes a signal processing unit to synthesizing signals output from the plurality of sub-groups 22 to produce a composite image);

a timing generator adapted to drive said plurality of pixel areas and said signal processing unit; and a control and operation unit adapted to control said signal processing unit and said timing generator (i.e., noted that the sensor 100 contains a bus 50 and decoder elements 60 and 62, thus, the digital camera of Meyers '535 must include a timing generator to drive the plurality of pixel areas 22 and control unit, such as microcomputer must be inherent to the digital camera system of Meyers '535).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Morris '010 shows an imaging device having a plurality of pixel areas arranged on a single semiconductor chip to be adjacent to each other through a predetermined space, each of said pixel areas having pixels arranged two-dimensionally, each pixel having a photoelectric conversion unit, and each pixel area is associated with a specific color signal (i.e., Red, Green or Blue; see col. 3, lines 35-40).

b. Sato '713, Wilder '871, Tangen '617 show a camera having a plurality of pixel areas arranged on a single semiconductor chip to be adjacent to each other through a predetermined space, each of said pixel areas having pixels arranged two-dimensionally.

- c. Fossum '483 shows an imaging device having a plurality of pixel and a plurality of micro-lenses for forming light into images (Fig. 5).
- d. Booth '029, Fan '885, Li '037 and Sirieix '108 show an imaging device having a plurality of pixel and a plurality of micro-lenses for forming light into images.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aung S. Moe whose telephone number is 571-272-7314. The examiner can normally be reached on Mon-Fri (9-5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 571-272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Aung S. Moe  
Primary Examiner  
Art Unit 2612